

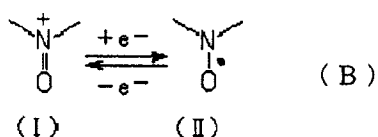
CLAIMS

1. A power storage device comprising a nitroxyl polymer which has a nitroxyl cation partial structure represented by the following chemical formula

(I) in oxidation state and has a nitroxyl radical partial structure represented by the following chemical formula (II) in reduction state, in a cathode;

employing a reaction for transferring an electron between the two states represented by the following equation (B) as an electrode reaction of the cathode; and using a cathode collector having a conductive auxiliary layer

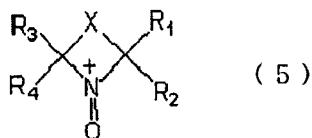
comprising carbon as a main component formed and integrated on an aluminum electrode.



2. The power storage device according to claim 1, further comprising an electro-conductivity imparting agent in the cathode, wherein the content of the electro-conductivity imparting agent in the cathode is 50 % by weight or less.

3. The power storage device according to claim 2, wherein the content of the electro-conductivity imparting agent is 40 % by weight or less.

4. The power storage device according to any one of claims 1 to 3, wherein the nitroxyl polymer is a polymer compound having a cyclic nitroxyl structure represented by the following chemical formula (5) in oxidation state:



wherein each of R₁ to R₄ independently represents an alkyl group, and X represents a divalent group so that the chemical formula (5) forms a 5- to 7-membered ring, while X constitutes a part of a side chain or a main chain of the polymer.

- 5 5. The power storage device according to claim 4, wherein the nitroxyl polymer is a polymer compound having a side chain containing a residue which removes at least one hydrogen atom bonded to an element forming at least one cyclic nitroxyl structure selected from the group consisting of a 2,2,6,6-tetramethylpiperidinoxyl cation represented by
- 10 chemical formula (6), a 2,2,5,5-tetramethylpyrrolidinoxyl cation represented by chemical formula (7) and a 2,2,5,5-tetramethylpyrrolinoxyl cation represented by chemical formula (8).

